

AD-A219 695

## NOTATION PAGE

1a. REPORT Unc		1b. RESTRICTIVE MARKINGS	
2a. SECURITY		3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution is unlimited.	
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE MAR 20 1990		5. MONITORING ORGANIZATION REPORT NUMBER(S)	
4. PERFORMING ORGANIZATION REPORT NUMBER USAFSAM-JA-90-5		7a. NAME OF MONITORING ORGANIZATION	
6a. NAME OF PERFORMING ORGANIZATION USAF School of Aerospace Medicine	6b. OFFICE SYMBOL (If applicable) NGN	7b. ADDRESS (City, State, and ZIP Code)	
3c. ADDRESS (City, State, and ZIP Code) Human Systems Division (AFSC) Brooks AFB TX 78235-5301		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8a. NAME OF FUNDING/SPONSORING ORGANIZATION USAF School of Aerospace Medicine	8b. OFFICE SYMBOL (If applicable)	10. SOURCE OF FUNDING NUMBERS	
3d. ADDRESS (City, State, and ZIP Code) Human Systems Division (AFSC) Brooks AFB TX 78235-5301		PROGRAM ELEMENT NO.	PROJECT NO. 7755
		TASK NO. 26	WORK UNIT ACCESSION NO. 01
11. TITLE (Include Security Classification) A Retrospective Study of Marital Discord in Pilots: The USAFSAM Experience			
12. PERSONAL AUTHOR(S) Raschmann, Jurgen K.; Patterson, John C.; Schofield, Gary L.			
13a. TYPE OF REPORT Final	13b. TIME COVERED FROM 89/7 TO 89/10	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT
16. SUPPLEMENTARY NOTATION			
17. COSATI CODES		18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	SUB-GROUP	
05	08		
		Pilots; Marital Discord <i>performance decrements</i> <i>stress psychology (C1)</i>	
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This exploratory retrospective multi-case study investigates marital discord in USAF pilots as part of an overall concern with mission safety. Seventeen USAF School of Aerospace Medicine (USAFSAM) cases involving marital distress were reviewed utilizing a standardized format. The most frequent problem noted was one of communication, with authoritarian or controlling styles predominating. The second most frequent conflict was over occupational demands; both pilots and spouses complained about frequent work-related separations. Nine of ten distressed outcomes (i.e., separated or divorced) were initiated by the wife. The notion that marital distress may adversely affect a pilot's attention, generating performance decrements, underscores the importance of investigating elements of marital harmony in the pilot population. Based on our study and review of the literature, we suggest the USAF employ programs that: a) recognize the spouse's contribution to mission safety; b) increase spouse's awareness of mission requirements; c) enhance couple's communication, and d) improve stress management skills. <i>Key words</i>			
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS		21. ABSTRACT SECURITY CLASSIFICATION Unclassified	
22a. NAME OF RESPONSIBLE INDIVIDUAL Jurgen K. Raschmann, Maj, USAF		22b. TELEPHONE (Include Area Code) (512) 536-3537	22c. OFFICE SYMBOL USAFSAM/NGN

1  
RASCHMANN

A Retrospective Study of Marital Discord in Pilots:  
The USAFSAM Experience

Jurgen K. Raschmann, Ph.D.  
Neuropsychiatry Branch  
USAF School of Aerospace Medicine  
Brooks AFB TX 78235-5301

John C. Patterson, Ph.D.  
Neuropsychiatry Branch  
USAF School of Aerospace Medicine  
Brooks AFB TX 78235-5301

Gary Schofield, BSOE  
Neuropsychiatry Branch  
USAF School of Aerospace Medicine  
Brooks AFB TX 78235-5301

Accession For	
NTIS CRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

Jurgen K. Raschmann, Ph.D.  
Neuropsychiatry Branch  
USAFSAM/NGN  
Brooks AFB TX 78235-5301  
(512) 536-3537



90 03 19 033

## Abstract

This exploratory retrospective multi-case study investigates marital discord in USAF pilots as part of an overall concern with mission safety. Seventeen USAF School of Aerospace Medicine (USAFSAM) cases involving marital distress were reviewed utilizing a standardized format. Duration of marital discord ranged from 1-10 years with an average of 2.25 years. The most frequent problem noted was one of communication, with authoritarian or controlling styles predominating. The second most frequent conflict was over occupational demands; both pilots and spouses complained about frequent work-related separations. Nine of ten distressed outcomes (i.e., separated or divorced) were initiated by the wife. Speculatively, a pilot with an inflexible communication style who is not cognizant of his spouse's emotional needs is likely to exacerbate marital problems. The notion that marital distress may adversely affect a pilot's attention, generating performance decrements, underscores the importance of investigating elements of marital harmony in the pilot population. Based on our study and review of the literature, we suggest the USAF employ programs that: a) recognize the spouse's contribution to mission safety; b) increase spouse's awareness of mission requirements; c) enhance couple's communication, and d) improve stress management skills.

Index terms: multi-case, mission safety

A RETROSPECTIVE STUDY OF  
MARITAL DISCORD IN PILOTS: THE USAFSAM EXPERIENCE

Jurgen Raschmann, Ph.D., John Patterson, Ph.D., and Gary Schofield, BSOE

Relationships are key elements in healthy psychological adjustment. Marriage, in particular, can fulfill needs for affection, intimacy and emotional support. Conversely, the deterioration of a marriage is an emotionally charged event which can adversely affect mood, cognition, and behavior. Mishap investigations commonly find that healthy psychological adjustment is a significant component in the human factors and aviation equation. Although some form of conflict is largely unavoidable, aviators who have a traditional viewpoint of marriage and who tend to assume a dominant role may needlessly exacerbate marital distress especially in times of role diffusion; subsequently, significantly influencing the distressed spouse/aviator's cockpit ability.

The successful evolution of a marriage requires substantial effort and adjustment. Societal influences over the past two decades (prompted by the women's movement and financial reality) have added considerable pressure to change the structure of marriage. No longer are traditional gender roles taken for granted. Women are emerging from dependent and subservient roles to independent and assertive roles. Many households are now dual career households. Wives frequently contribute directly to family financial integrity. As a result of increasing equality between the sexes and increased women's feelings

---

The research reported in this paper was conducted by personnel of the Neuropsychiatry Branch, Clinical Sciences Division, USAF School of Aerospace Medicine, Human Systems Division, AFSC, United States Air Force, Brooks AFB, Texas.

of self-worth, many wives demand more support and emotional responsiveness. This stance has engendered a degree of resistance from some husbands who have been unwilling to give up their traditional dominant position. Further, well-educated men are becoming increasingly enlightened about emotional needs, especially as lay information about stress becomes more readily available. Thus, some men are also expecting more from marriage than clean socks and warm meals. These relational demands on marriage threaten firm traditional views of the role of married women which is aptly captured by the German saying "Kinder, Kirche, Kuche" (children, church, kitchen).

Role definition changes are obvious in the general population and are also evident in the male pilot population. Certain pilots may be more vulnerable to marital conflicts given the often-cited pilot profile. A review of the literature on the pilot personality (2, 4, 5, 7) points to a relatively homogeneous host of characteristics shared by pilots. They tend to have above average intelligence and are in excellent physical health. Interpersonally, they tend to be dominant. Relationships of male pilots with other men are unconflicted; however, they tend to exhibit mild anxiety when feeling too close to women. They tend to take on a traditional role in marriages. They are self-sufficient and well controlled, rather than interdependent and emotionally expressive. They tend to be energetic and have a high need to achieve. They often exude an easy-going confidence. Overall, they tend to be psychologically healthy. These same strengths, however, can be weaknesses, especially where intimate relationships are concerned.

As a group, pilots tend to avoid and deny their internal emotional life and may appear emotionally distant (8). Intimacy, however, requires open and honest expression of thoughts and feelings. Such emotional expression is the necessary first step of problem identification which can lead to resolution. However, a high need for control and dominance is antagonistic to open, healthy communication and resolution. In addition, this style stands in the way of providing the reciprocal nurturing and emotional support required for a maturing relationship. It is not uncommon to hear a pilot at the brink of divorce say "I never realized we had any problems."

All humans experience psychological stress in varying degrees and at different times in life. Some observers have suggested that when unavoidably confronted with stress (e.g., interpersonal conflict, separation, divorce) some pilots tend to resort to defenses such as denial, repression, isolation of feelings, or increased "doing" (8). However, these mechanisms can fail in the face of the unfamiliar challenge of intense, interpersonal emotions and are, consequently, inadequate to help a failing marriage. Yanowitch, 1977, speculates that psychosocial stresses can overload the aviator's information processing capacity. The distressed, no longer in control, flier may then begin to exhibit signs such as decreased cognitive acuity and concentration which, in turn, can impact mission safety especially during critical phases of flight. For instance, Alkov, et al, 1982, conducted a questionnaire study and found aircrew members who contribute to US Naval aircraft mishaps are more likely to be identified as having troubles with their marriages and other interpersonal relationships. They recommend that aviators identified as having interpersonal problems should be counseled and taken off flight schedules when appropri-

ate. Although their study is not conclusive, it suggests the importance of paying attention to the aviator in a distressed relationship.

Most of what has been written about aviator marriages is anecdotal, comes from the civilian sector, or is speculative. In one study, Cooper and Sloan, 1985, assessed the impact of the commercial pilots' job on wives. Pilots' wives were found to feel like single parents because the absent pilot husband did not fully share the family responsibility. They found that wives were frequently expected to provide support to their pilot husband after a stressful and tiring day on the job, at a time when wives could use equivalent solace. Irregular work schedules contributed heavily to disrupted family plans. Interestingly, this study indicated that wives were less at risk for life dissatisfaction if they were employed. Having a career helped offset marital problems by increasing self-satisfaction.

Similar to commercial aviators, Air Force (USAF) pilot marriages are exposed to a variety of stresses. Frequent rotations, military exercises and temporary duty (TDY) may leave a spouse feeling like a single parent. Unlike Cooper and Sloan's group, Air Force wives may also have the additional stress of moving too often making a career difficult, or being pressured not to work in order to support the organization and her husband's career. The wife's conflicts about a job can serve as a double-edged sword. On one hand, the spouse may resent subtle pressure not to work, but she may also benefit from the group support provided by the Officers Spouse's Club and other pilots wives' groups.

In summary, there have been few studies on the married aviator. However, relationship patterns are changing and significant marital problems may impact flight safety. Consequently, we reviewed USAF School of Aerospace Medicine (USAFSAM) cases involving marital distress in order to examine trends and to consider future direction for study and intervention.

#### Method

Cases of pilots with marital problems were identified using USAFSAM's computerized data base. All records in the years 1980-1989 were reviewed utilizing a standard format developed for this study covering demographics, areas of marital conflict, marital disposition, spouses' status, referral diagnoses, final diagnoses and USAFSAM recommendations.

#### Results

From 1980-89, there was data on 21 male pilots with marital problems. Of the charts reviewed, four were determined to have insufficient information for analysis and were eliminated from the study. Table I summarizes the age, rank, and assigned aircraft for the 17 remaining cases. The average age of the sample was 35. The modal rank was captain. There were a variety of aircraft represented but the F-15 and F-16 were absent. Average flight time was 1,791 hours with a range of 300 hours to 3,500 hours. Intellectual functioning as measured by the WAIS-R or the Shipley averaged 123 and 119 respectively.

---

INSERT TABLE I HERE

---



Duration of marital discord ranged from 1-10 years with an average of 2.25 years. A number of conflicts were represented. Table II sums up conflicts and ranks them in order of the number of complaints. The most frequent complaint (14 out of 17 cases) was communication. Several spouses perceived their husbands as being too authoritarian or controlling. The second most frequent conflict was occupation; both spouses and pilots complained about the impact of TDYs and separations on their relationships. Further evidence of stress in the relationship was indicated by cases of unfaithfulness, alcohol problems, religious, sexual, financial, family and cultural conflicts.

---

INSERT TABLE II HERE

---

Extramarital affairs were about equally divided between pilot and spouse. All three alcohol problems pertained to pilots. One case of maltreatment was initiated by the pilot, the other by the spouse. Religious conflict pertained to church attendance. The conflict about in-laws applied to intrusiveness. The sexual complaint was related to frequency. The financial complaint referred to alimony. Finally, the cross-cultural difficulty was associated with a foreign-born spouse who was having difficulty adapting to life in the United States.

Table III represents the marital status of the pilots at the time of their USAFSAM evaluations. Surprisingly, nine of the ten distressed outcomes (i.e., separated or divorced) were initiated by the wife.

---

INSERT TABLE III HERE

---

Table IV summarizes the referral diagnosis, final diagnosis, and final aeromedical disposition. Pilots with marital problems not confounded by other significant conditions were recommended for return to flying status.

---

INSERT TABLE IV HERE

---

#### Discussion

The typical pilot in our sample was a mid-30's, mid-career, male captain with an average of 1,791 flight hours. The major areas of conflict giving rise to marital discord were (1) less than optimal communication styles and (2) occupational demands. Fourteen out of seventeen cases evidenced communication difficulties. Although aviators are very adept at communicating ideas and facts, the aviators in this study had great difficulty sharing their personal feelings. A predominantly authoritarian, controlling, action-oriented style is likely to disrupt the growth of a relationship and dismiss needs for intimacy and equity.

Unquestionably, communication has a powerful impact on the quality of a relationship. Effective communication enhances conflict resolution, empathy and understanding. Through communication of our thoughts, feelings, and goals, we

help a relationship grow. Conversely, failing to recognize or deal with feelings can block growth. Feelings that are suppressed often surface in a destructive, acted-out manner. Having learned to compartmentalize life's conflicts, the aviator is often surprised when his spouse asks for a divorce. In our sample, conflict had existed in some cases for up to ten years. Speculatively, the aviator, as a means of coping, may have denied or ignored the importance of signs and symptoms of his failing marriage.

Open communication is especially important in marriages faced with repetitive stresses, burdens, and hardships such as those often found in a USAF flying career. Taking second place to an aircraft, for example, is generally not fulfilling to women. Our study suggests stresses such as TDYs, rotations, and potential aircraft mishaps can all compound existing marital difficulties. Women today are less likely to accept a diminished quality of life. As an example, nine out of ten of the distressed outcomes (separated or divorced) were initiated by the spouse. The presence of spousal employment did not serve as a buffer in our sample.

Marital discord, separation, and divorce usually cause feelings of failure and may overwhelm coping mechanisms. Our study is not exhaustive (sample size is small, selective, and may not represent the pilot population); however, the study's descriptive nature and the homogeneity of the general pilot population allow one to infer that certain intrapersonal styles associated with pilots may increase the probability of marital strife. In particular, a male aviator with an inflexible communication style, who does not realize his wife's emotional needs is likely to exacerbate marital problems. Moreover, the

notion that marital distress may adversely affect a pilot's attention and generate performance decrements underscores the importance of investigating marital satisfaction as a means of formulating preventive strategies.

Programs which emphasize awareness and marital enrichment have been underplayed as a means of enhancing mission safety. Karlins et al, 1989, present an excellent example of a Singapore Airlines Program in which (a) spouses are openly recognized for their contributions to safe aircraft operation; and (b) both husband and wife are made aware of the special needs, concerns, and challenges that each partner faces in an "airline marriage". A similar program could be adapted for use by the USAF.

Based on our findings, we recommend adding a section on communication skills and stress management to the aforementioned Singapore Airlines Program. Programs initiated by aviation psychologists and flight surgeons could be introduced during safety meetings, spouses' club meetings, and couples' sessions. The emphasis would be on training and awareness, not on therapy. Given the complexity of today's flying environment and mission requirements, a well-thought-out intervention could enhance marital satisfaction, pilot retention, and mission safety.

TABLE I  
SUMMARY OF AGE, RANK, CURRENT AIRCRAFT FLOWN

AGE	(FREQUENCY)	RANK	(FREQUENCY)	AIRCRAFT	(FREQUENCY)
27	(1)	01	(1)	T-37	(2)
28	(3)	02	(2)	T-38	(3)
29	(1)	03	(10)	F-4	(4)
34	(1)	04	(2)	A-10	(1)
35	(2)	05	(2)	C-5	(1)
36	(2)	06	(1)	KC-135	(3)
38	(3)			02A	(1)
39	(1)			CH3E	(1)
40	(2)			UH3E	(1)
47	(1)				

TABLE II  
CONFLICT AREAS AND NUMBER OF CASES REPRESENTED

CONFLICT AREA	NUMBER OF CASES
COMMUNICATION	14
OCCUPATION	10
AFFAIRS	5
ALCOHOL	3
PHYSICAL ABUSE	2
RELIGION	2
IN-LAWS	1
SEX	1
FINANCES	1
CROSS-CULTURAL	1

TABLE III  
MARITAL STATUS OF PILOT AT TIME OF EVALUATION

STATUS	NUMBER OF CASES
SEPARATED	5
SEPARATED AND PENDING DIVORCE	3
DIVORCED	2
STATUS UNCHANGED	7

TABLE IV  
CLINICAL SUMMARY OF DIAGNOSES AND DISPOSITION

CASE No.	REFERRAL DIAGNOSIS	FINAL DIAGNOSIS	DISP
1	Situational reaction	- Situational reaction - Marital problem	Q
2	Gastritis Possible alcohol abuse	- Marital problem - Alcohol abuse	DQ
3	Depressive Symptoms	- Situational reaction - Marital problem	Q
4	Suicide gesture Marital Discord	- Marital problem - Adjustment disorder	DQ
5	Schizophreniform Disorder	- Adjustment reaction - Marital problem	DQ
6	History of psychological incidents	- Marital problem	FWW
7	Persistent chest pain	- Marital problem	FWW
8	R/O Personality Disorder History of chest pain	- History of adjustment disorder - Marital problem	DQ
9	Chest pain	- Alcohol abuse - Marital discord	DQ
10	R/O personality disorder R/O anxiety disorder	- Atypical anxiety disorder - Marital problem	FWW
11	Adjustment disorder R/O mixed personality disorder	- Marital problem	FWW
12	Adjustment disorder Alcohol abuse	- Alcohol abuse, resolved - Suicide gesture - Marital problem	FWW
13	Adjustment disorder	- Marital problem	Q
14	R/O anxiety reaction R/O simple phobia	- Marital problem	Q
15	R/O migraine	- Marital problem	Q
16	Adjustment reaction Marital problem	- Marital problem, resolved	FWW
17	R/O marital problem	- Phase of life problem - Marital problem	FWW

DISP. = DISPOSITION AS DETERMINED BY USAFSAM CLINICAL DIVISION (Q = QUALIFIED;  
DQ = DISQUALIFIED; FWW = FLY WITH WAIVER)



REFERENCES

1. Aikov RA, Borowsky MS, Gaynor JA. Stress coping and the U.S. Navy aircrew factor mishap. *Aviat. Space Environ. Med.* 1982; 53:1112-15.
2. Ashman A, Telfer R. Personality profiles of pilots. *Aviat. Space Environ. Med.* 1983; 54:940-43.
3. Cooper CL, Sloan S. The sources of stress on the wives of commercial airline pilots. *Aviat. Space Environ. Med.* 1985; 56:317-21.
4. Fine PM, Hartman BO. Psychiatric strengths and weaknesses of typical Air Force pilots. SAM-TR-68-121. USAF School of Aerospace Medicine, Brooks AFB TX, 1968.
5. Karlins M, Koh F, McCully L. The spousal factor in pilot stress. *Aviat. Space Environ. Med.* 1989; 60:1112-5.
6. Norello JR, Youseff ZI. Psychosocial studies in general aviation: I. Personality Profile of Male Pilots. *Aerospace Med.* 1974; 45:185-88.
7. Reinhardt RF. The outstanding jet pilot. *Am. J. Psychiatry.* 1970; 127:32-36.
8. Ursano RJ. Stress and adaptation: the interaction of the pilot personality and disease. *Aviat. Space Environ. Med.* 1980; 51:1245-49.
9. Yanowitch RE. Crew behavior in accident causation. *Aviat. Space Environ. Med.* 1977; 48:918-21.